

In the Claims

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 4-28 without prejudice or disclaimer.

Please amend pending claims 1-3, and add new claims 29-39, as noted below.

Listing of the Claims

1. (currently amended) A communication circuit comprising:

an all-digital loop circuit configured to output a sample rate control signal to control a
clock rate of a digital circuit element to be a function of a frequency of a reference
signal received by the communication circuit; and

a variable-ratio sample rate filter that changes a sample rate of an output digital data
stream relative to a sample rate of an input digital data stream in response to the
sample rate control signal received from the all-digital loop circuit.
2. (currently amended) The communication circuit claimed in claim 1 wherein the
communication circuit further comprises ~~includes~~ an analog-to-digital converter;
coupled to the variable-ratio sample rate filter loop circuit, that digitizes the signal
received , and a fixed clock coupled to the analog-to-digital converter to substantially
fix a sampling rate of the analog-to-digital converter.
3. (currently amended) The communication circuit claimed in claim 2 wherein the ~~digital~~
~~circuit element includes~~ variable-ratio sample rate filter comprises a digital decimation
filter, ~~coupled to the analog-to-digital converter.~~
- 4-28 (canceled)

29. (new) The communication circuit claimed in claim 1 wherein the reference signal comprises a pilot tone signal.
30. (new) The communication circuit claimed in claim 1 wherein the communication circuit further comprises a digital-to-analog converter coupled to the variable-ratio sample rate filter, and a fixed clock coupled to the digital-to-analog converter to substantially fix a sampling rate of the digital-to-analog converter.
31. (new) The communication circuit claimed in claim 30 wherein the variable-ratio sample rate filter comprises an interpolation filter.
32. (new) The communication circuit claimed in claim 31 wherein the interpolation filter comprises an ADSL interpolation filter.
33. (new) The communication circuit claimed in claim 31 wherein the interpolation filter comprises a POTS interpolation filter.
34. (new) The communication circuit claimed in claim 3 wherein the decimation filter comprises an ADSL decimation filter.
35. (new) The communication circuit claimed in claim 3 wherein the decimation filter comprises a POTS decimation filter.
36. (new) The communication circuit claimed in claim 2 wherein the communication circuit further comprises a second variable-ratio sample rate filter, and a digital-to-analog converter coupled to both the second variable-ratio sample rate filter and the fixed clock to substantially fix a sampling rate of the digital-to-analog converter.
37. (new) The communication circuit claimed in claim 36 wherein the variable-ratio sample rate filter comprises a decimation filter, and the second variable-ratio sample rate filter comprises an interpolation filter.

38. (new) The communication circuit claimed in claim 37 wherein the decimation filter comprises an ADSL decimation filter and the interpolation filter comprises an ADSL interpolation filter.
39. (new) The communication circuit claimed in claim 37 wherein the decimation filter comprises a POTS decimation filter and the interpolation filter comprises a POTS interpolation filter.